TRAVAUX DU MUSÉUM NATIONAL D'HISTOIRE NATURELLE «GRIGORE ANTIPA»
THE JOURNAL OF "GRIGORE ANTIPA" NATIONAL MUSEUM OF NATURAL HISTORY

Travaux du Muséum National d'Histoire Naturelle "Grigore Antipa" 67 (1): 65–70 (2024)
doi: 10.3897/travaux.67.e110398

RESEARCH ARTICLE

First record of the seed beetle *Bruchidius siliquastri* (Coleoptera, Chrysomelidae, Bruchinae) from Greece

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Received 1 August 2023 | Accepted 6 November 2023 | Published 30 June 2024

Citation: Gastouniotis G, Boulas A, Gastouniotis P (2024) First record of the seed beetle *Bruchidius siliquastri* (Coleoptera, Chrysomelidae, Bruchinae) from Greece. Travaux du Muséum National d'Histoire Naturelle "Grigore Antipa" 67(1): 65–70. https://doi.org/10.3897/travaux.67.e110398

Abstract

Bruchidius siliquastri Delobel, 2007, a chrysomelid species presumably of East Asian origin, is recorded for the first time in Greece. It is regarded as an invasive species in Europe that feeds on the seeds of *Cercis siliquastrum* L. (Fabaceae). The species distribution and ecology are briefly discussed. An additional record of *Bruchidius terrenus* (Sharp 1886) in Greece is also provided.

Keywords

Chrysomelidae, *Cercis siliquastrum*, invasive species, seed beetles.

Introduction

The chrysomelid species *Bruchidius siliquastri* Delobel, 2007 is a relatively recently-described species with the type series consisting of specimens reared from pods of *Cercis siliquastrum* L. (Fabaceae) in southern France. Specimens from China and Hungary were also reported without becoming a part of type series (Kergoat et al. 2007). Since its description, the species has been reported in many countries with the currently-known distribution including the following countries: France, Hungary, Slovakia, Belgium, Gibraltar, Spain, Czech Republic, Bulgaria, Monaco, Serbia, Germany, Britain, Crimea (Ukraine), Italy, Romania, Turkey, China and South Korea (Kergoat et al. 2007; Kollár et al. 2009; Hanssens 2009; Yus Ramos et al. 2009; Šefrová

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2010; Stojanova et al. 2011; Ponel et al. 2011; Gavrilović and Savić 2013; Rheinheimer and Hassler 2013; Hizal and Parlak 2013; Barclay 2014; Martynov and Nikulina 2015; Yus Ramos and Bocci 2017; Pintilioaie et al. 2018; Jeong et al. 2022). *Bruchidius* Schilsky, 1905 is a bruchine genus represented by more than 50 species in Greece (Borowiec and Anton 1993; Ricci and Zampetti 2005; Anton 2010; Yus-Ramos and Angelini 2018). *B. siliquastri* is the second non-native species of this genus that has been found in Greece, after *B. terrenus* (Sharp, 1886) (Stojanova 2010) and the 11th species (excluding species of the genus *Bruchus* whose alien status is speculative) of non-native Bruchinae in general (Yus-Ramos et al. 2014).

Materials and methods

Specimens of *B. siliquastri* were collected in both rural and urban areas of Greece, using a sweeping net. All specimens are dry mounted on paper boards, stored in the authors' collections. The identification of both *Bruchidius* species was made following the key given by Yus-Ramos et al. (2014). The morphology of the specimens is consistent with the key, except for the coloration of the abdomen which in *B. siliquastri* from Greece is black on the tergites and base of the pygidium (Fig. 1 B, C).

Specimens examined

Bruchidius siliquastri Delobel, 2007
GREECE • 6 specimens [5♀, 1♂(Fig. 1 B, D)]; Corinthia; Nemea; 34.819°N; 22.671°E; 02 March 2023 • 6 specimens (6♀); same location; 13 May 2023 • 2 specimens [1♀(Fig. 1 A, C, E), 1♂]; Corinthia; near Soulinari; 37.9111°N; 22.755°E; 12 May 2023 • 3 specimens (3♀); Corinthia; near Halki; 37.870°N; 22.708°E; 12 May 2023 • 1 specimen (♀); Attica; Athens; 34.984°N; 23.707°E; 02 March 2023 G. Gastouniotis coll. and det. • 5 specimens (4♀, 1♂); Trikala Pref.; near Monastery of St. Varlaam; 39.724°N; 21.630°E; 12 June 2023 P. Gastouniotis coll., G. Gastouniotis det.• 1 specimen (1♀); Attica; Alimos; 37.911°N; 23.728°E; 10 May 2023 • 1 specimen; Attica; Argyroupoli; 37.914°N; 23.763°E; 14 May 2023 • 1 specimen (♀); Eurytania; near Fournas; 39.049°N; 21.873°E; 21 June 2023 A. Boulas coll., G. Gastouniotis det.; all specimens where collected on *Cercis siliquastrum*.

Bruchidius terrenus (Sharp. 1886)
GREECE • 1 specimen (♀); Attica; Athens; 34.984°N; 23.707°E; 02 March 2023 G. Gastouniotis coll. and det.; collected on *Cercis siliquastrum*.

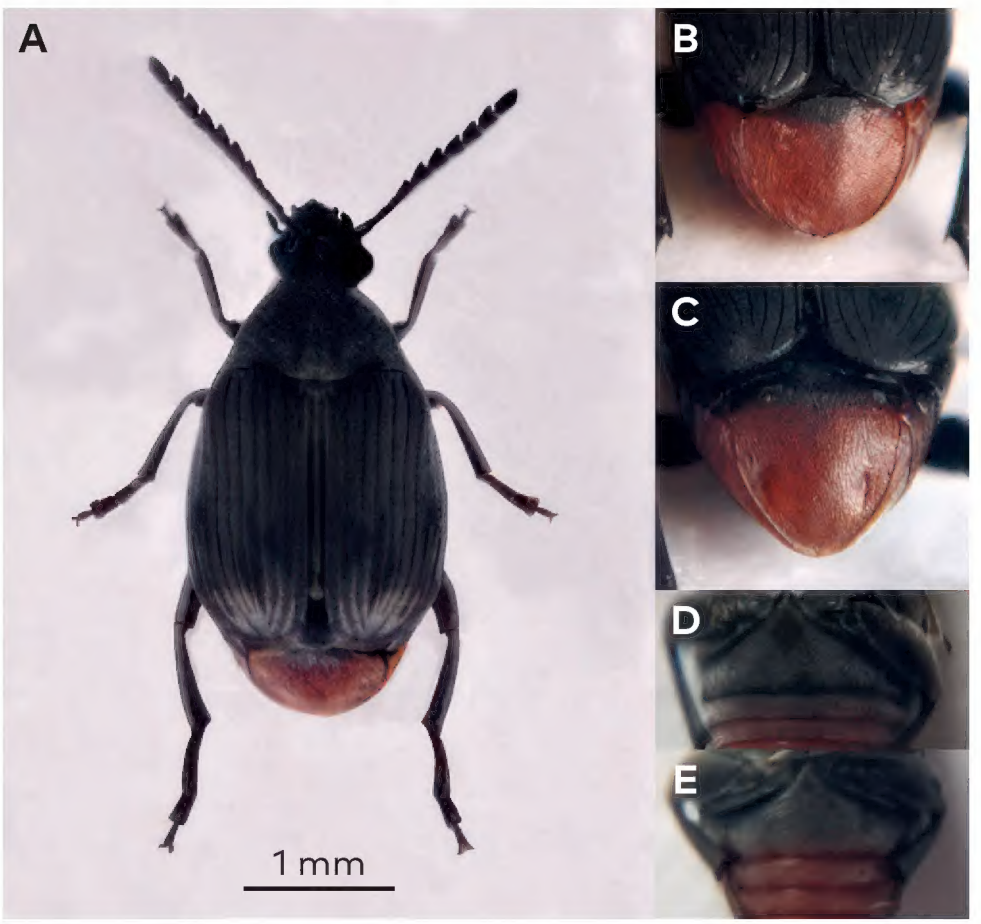

Figure 1. *Bruchidius siliquastri* Delobel, 2007: **A** female habitus; **B** pygidium of male; **C** pygidium of female; **D** male ventrite 1; **E** female ventrite 1.

Figure 2. Distribution map of *Bruchidius siliquastri* in Greece [blue dot – collected specimens; red dot – published records from nearby localities in Bulgaria (Stojanova et al. 2011)] and new record of *Bruchidius terrenus* (orange dot).

Discussion

Bruchidius siliquastri is reported for the first time from Greece, increasing the known distribution of the species in Europe. Due to the number of localities where the species was found in Peloponnese and Central Greece (Fig. 2), it is expected to be widely distributed in Mainland Greece. It is also expected to be found in Northern Greece due to records in nearby localities in Bulgaria (Stojanova et al. 2011). The presence of the species in Greece is similar to that of *Bruchidius terrenus* (Sharp, 1886), as both feed on seeds of ornamental plants, *Cercis siliquastrum* and *Albizia julibrissin* Durazz respectively. Currently, have no economic importance, unlike other non-native Bruchinae such as *Acanthoscelides obtectus* (Say, 1831) and *Callosobruchus maculatus* (Fabricius, 1775), which are serious pests of stored legumes (Yus-Ramos et al. 2014).

The majority of specimens were collected on *Cercis siliquastrum* leaves while a single individual was found hiding among the seed pods. This specimen was collected in Athens, and was hiding alongside a single individual of *Bruchidius terrenus*, probably emerged from a nearby *Albizia julibrissin*. This is only the second recorded locality for *B. terrenus* in Greece, and the southernmost, after the first record in 2010 from pods of *Albizia julibrissin* collected in 2009 from Thessaloniki (Stojanova 2010).

Acknowledgements

We are highly grateful to Robert S. Jacobson and the two anonymous reviewers for their constructive suggestions which improved the quality of the manuscript.

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